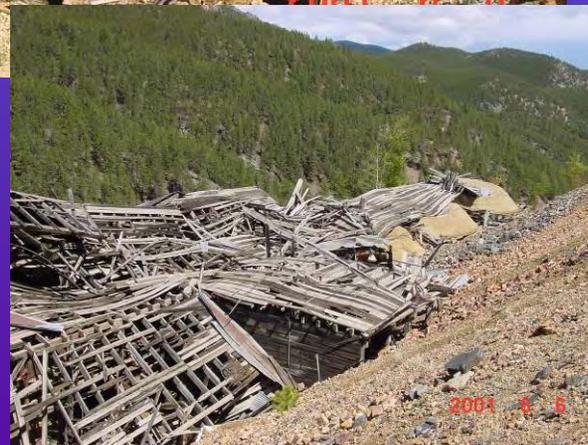
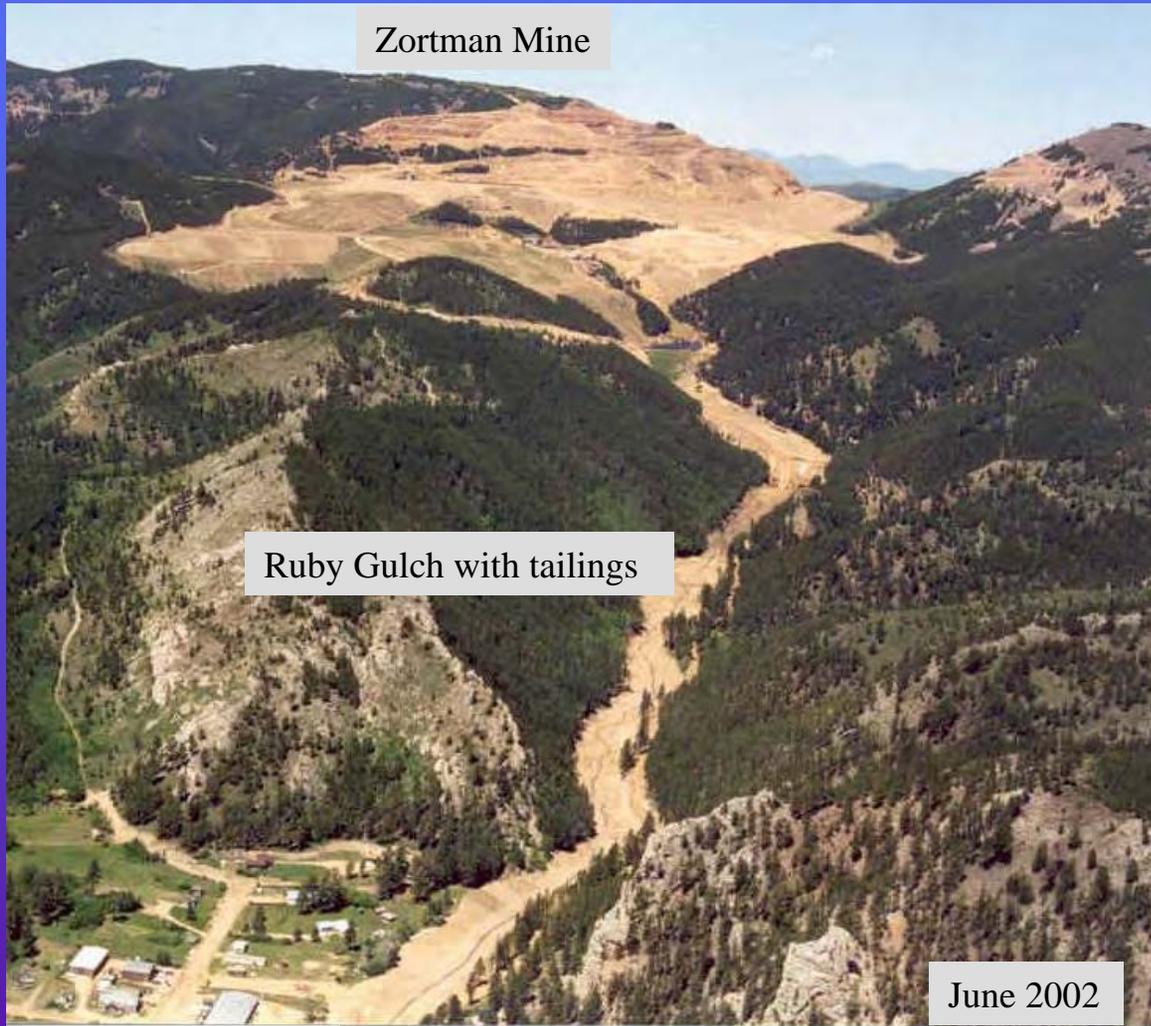


Ruby Gulch Tailings Reclamation



- Generated by the Whitcomb Mill
- Cyanide Vat leach tailings dumped in Ruby Gulch during early mining
- Used as construction material for area projects
- 1 million cubic yards left in the drainage at mine closure

Ruby Gulch Tailings Reclamation



Zortman Mine

Ruby Gulch with tailings

June 2002

Zortman townsite

- Migrated downstream through the town of Zortman
- Covers the Ruby Gulch Drainage

From mid-point in Zortman looking downstream at Ruby Gulch drainage. Note elevated level of channel compared to surrounding residents.



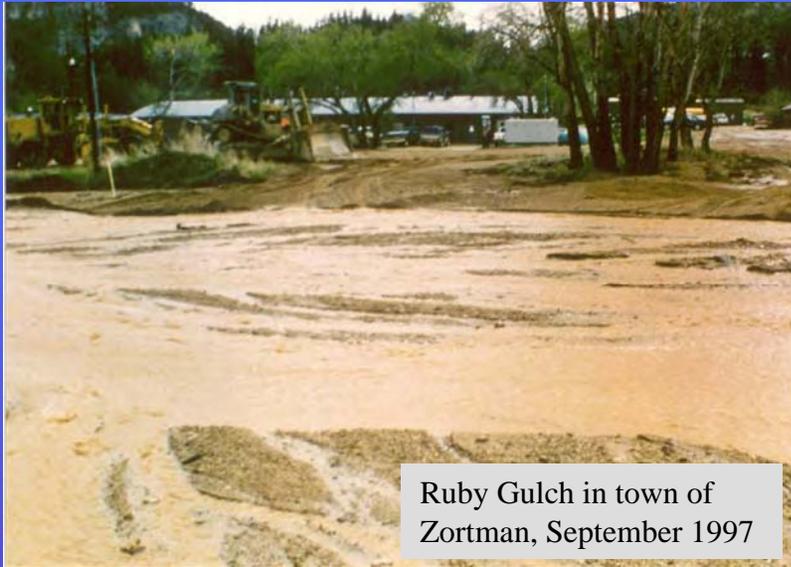
2001 5 25



2001 6 5

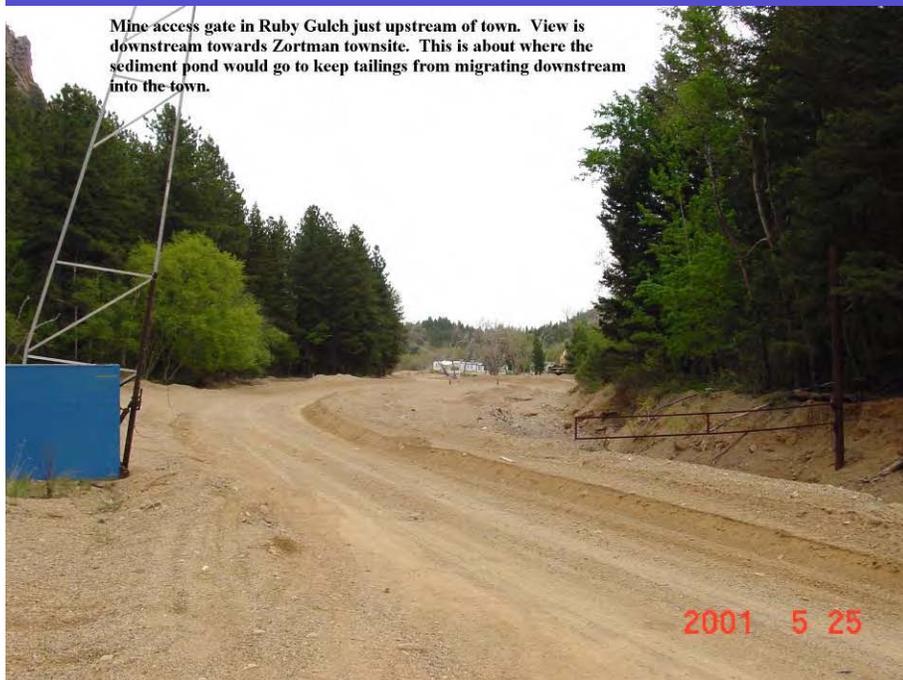
**Typical Runoff After 2+ Inches of Rainfall
Downtown Zortman, June 2001**

Ruby Gulch Tailings Reclamation



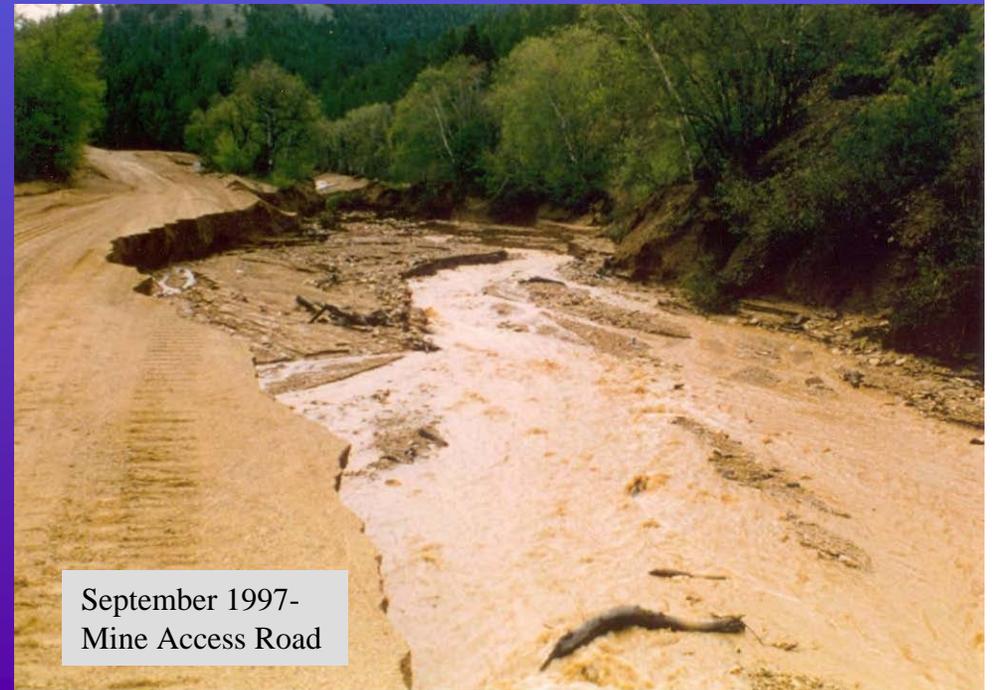
Ruby Gulch in town of Zortman, September 1997

- Unstable in the Streambed
- Long term maintenance problem for town and mine reclamation access
- Valuable as construction and reclamation material



Mine access gate in Ruby Gulch just upstream of town. View is downstream towards Zortman townsite. This is about where the sediment pond would go to keep tailings from migrating downstream into the town.

2001 5 25



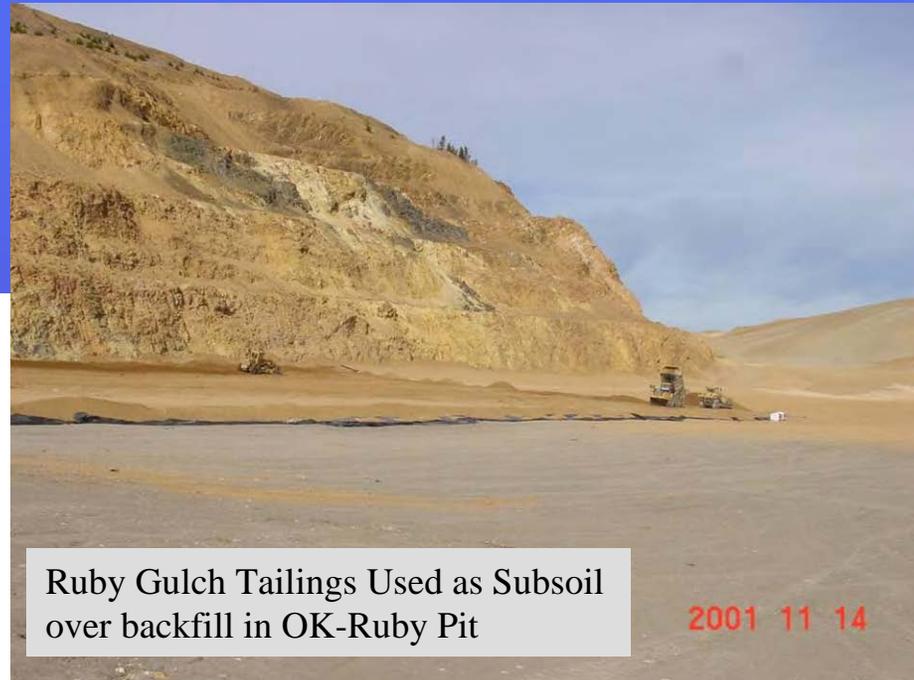
September 1997-
Mine Access Road

Ruby Gulch Tailings Reclamation



- \$700,000 from BLM
- \$300,000 from State DEQ
- Tailings removal started in July 2001

Ruby Gulch Tailings Reclamation



Ruby Gulch Tailings Used as Subsoil
over backfill in OK-Ruby Pit

2001 11 14



Capping Backfill on OK-Ruby Pit to Limit
Infiltration and Acid Drainage Formation

2002 4 16

Most tailings
were used as
subsoil at the
Zortman Mine
during mine pit
reclamation

Ruby Gulch Tailings Reclamation

- Roads removed from stream bottom
- Road crossing installed in 2002



Ruby Gulch Tailings Reclamation



**Ruby Gulch crossing
installation – June 2002**

**Ruby Gulch through town
of Zortman – July 2005**



**From mid-point in Zortman looking upstream in
the Ruby Gulch drainage**



**Zortman townsite looking upstream
before tailings removal. Main road
runs up the stream axis.**

2001 5 25



2002 4 15





**Tailings Removed, Channel Reshaped,
Roads Rerouted to Cross Stream at Right
Angle, and Streambank Revegetated**

JUN 15 2005

Ruby Gulch Tailings Reclamation

From mid-point in Zortman looking upstream in the Ruby Gulch drainage



2001 5

Ruby Gulch drainage through town of Zortman – May 2001

Ruby Gulch drainage through town of Zortman – June 2005



JUN 15 2005

Ruby Gulch Tailings Reclamation



**Ruby Gulch, Upstream
Zortman Townsite,
September 1997**

**Ruby Gulch After Tailing Removal
and Erosion Control, June 2005**



Ruby Gulch Tailings Reclamation

From mid-point in Zortman looking downstream at Ruby Gulch drainage. Note elevated level of channel compared to surrounding residents.



**Zortman Townsite Before
Tailing Removal, May 2001**

**Zortman Townsite After Tailing
Removal and Streambed
Restoration, July 2005**



Ruby Gulch Tailings Reclamation



Ruby Gulch flowing through town of Zortman – June 2001

Red circle is same residence in each photo for reference

Ruby Gulch flowing through town of Zortman – June 2005



Ruby Gulch Tailings Reclamation



**June 2005- Ruby Gulch
near old mine office**



**September 1997- Ruby
Gulch near old mine office**

